CMa10w/CMa11w

English

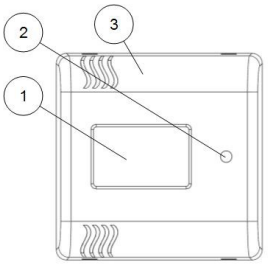
Indoor temperature/humidity sensor, Wireless M-Bus

INTRODUCTION

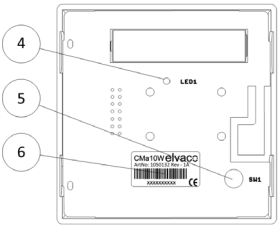
CMa10w/CMa11w is a 1-way Wireless M-Bus temperature/humidity sensor developed for indoor use. The product is available with (CMa10w) or without (CMa11w) LCD display.

For more information about the product, please visit the Elvaco AB website, http://www.elvaco.com.

OVERVIEW



1. LCD display*
2. Push button (SW2)*
3. NFC antenna



4. LED light
5. Push button (SW1)
6. Serial number

MOUNTING

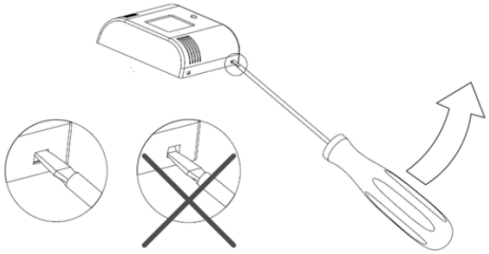
The sensor is mounted on a wall by using the holes on the product rear cover.

IMPORTANT

- Avoid mounting the product near supplementary heat sources, such as kitchen stoves, or in direct sunlight.
- Make sure to mount the product at least 1.5 meters from the floor and at least 1 meter from the nearest radiator.
- Do not mount the product on an external wall or near a door. If mounted over a conduit pipe, make sure that the pipe is filled to prevent air flow.
- Do not mount the sensor in a steel cabinet. Doing so will dramatically decrease the signal coverage.

DEMOUNTING

To demount the sensor, carefully insert the end of a screwdriver in the upper part of one of the enclosure bottom holes, as illustrated below.



WIRELESS M-BUS

Upon delivery, the sensor will be deactivated with the radio turned off. The product will start transmitting data as soon as it is activated.

ACTIVATION

The sensor can operate in two different modes: encrypted mode or unencrypted mode. Please advise your project manager about the best option for your specific project.

Unencrypted mode

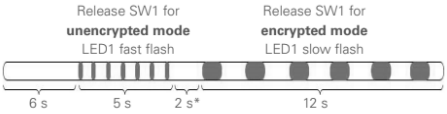
To activate the unencrypted mode:

1. Press and hold push button SW1 (5) for 6-10 seconds until the LED light (4) starts to flash quickly.
2. Release push button SW1.

Encrypted mode

To activate the encrypted mode:

1. Press and hold push button SW1 (4) for at least 13 seconds until the LED light (4) starts to flash slowly.
2. Release push button SW1.



*** If the button is released in this mode, the CMa10w/CMa11w will return to inactive mode. This also applies if the button is pressed down for longer than 25 seconds.**

IMPORTANT

- Make sure to verify that the product is activated by pressing SW1. If the product is set to encrypted mode, the LED light (4) will flash five times, if it is set to unencrypted mode, it will flash once.

OPERATION

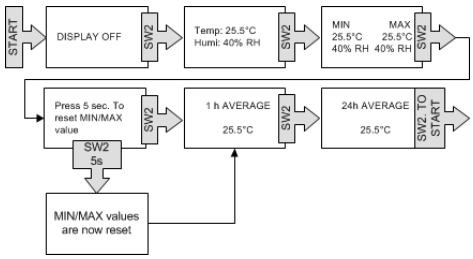
Upon activation, the sensor will begin transmitting wireless M-Bus telegrams in mode T1 every 6th minute. The telegrams contain sensor data as well as various information about the product status.

CONFIGURE SETTINGS VIA LDC DISPLAY*

CMa10w has two different display modes: the standard mode and the setup mode. End-users will only have access to the standard mode, which displays current sensor information. The setup mode is entered using the SW1 push button (5) at the back of the product and can be used to configure settings for the sensor. In normal operation mode, the LCD display will be turned off in order to conserve battery life.

Standard mode

Push button SW2 (2) on the front is used to display the next page, and get information about average, maximum and minimum values.

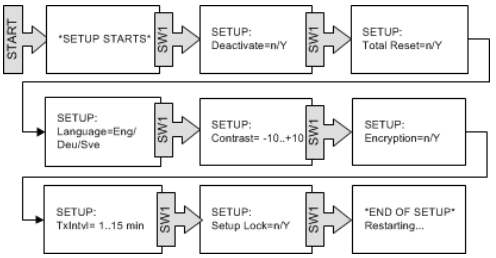


Setup mode

The setup mode is entered by pressing and holding push button SW1 (4) for 5 seconds (when LCD display is off). When using the setup mode, the next page is displayed by pressing SW1 for 2 seconds. To configure the value of a field, press push button SW2 (2). If there are more than one configurable field on a page, push button SW1 is used to switch between them.

IMPORTANT

- If setup lock is enabled, the device cannot be unlocked again.



CONFIGURE SETTINGS VIA NFC

CMa10w/CMa11w is equipped with an NFC module, which can be used to configure settings or read data. Please refer to the user's manual for more information on how to use NFC.

FACTORY DEFAULT RESET

In order to reset CMa10w to factory default settings, enter the setup mode and navigate to "Total Reset". Select "y".

Below, the factory default settings for CMa10w and CMa11w are listed.

Factory default settings

Language	ENG
Transmit interval	6 minutes
Encryption mode	Off
LCD contrast	0
Locked	No

TROUBLESHOOTING

The master does not receive any telegram from the sensor

Please verify that:

- The product has been activated.
- The master is connected to a power source and is correctly configured.
- The master is within range of the radio signal.
- The master antenna is properly mounted for ideal performance.
- The master and the sensor use the same wireless M-Bus mode (T1).
- The sensor is not mounted inside a metallic cabinet.
- The sensor is not disturbed by other radio equipment.

CMa10w does not display any information

Please verify that:

- The sensor has been activated.
- The contrast of the LCD display is not too low.
- There is still battery life left in the sensor. The serial number informs about when the product was manufactured. The sensor has a battery life span of up to 12 years (depending on usage).

Temperature value is inaccurate

Althugh the temperature sensor is normally very accurate, an incorrect positioning of the product can sometimes result in unintended temperature variations. When mounting the sensor, please verify that:

- The product is not mounted near any heat or cold sources.
- The product is not mounted in direct sunlight
- The product is not mounted in a spotlight beam.

SAFETY

The warranty does not cover damage to the product caused by usage in any other way than described in this manual. Elvaco AB can not be liable for personal injury or property damage caused by usage in any other way than described in this manual.

TECHNICAL SPECIFICATIONS

Mechanics

Protection class	IP30
Dimensions (w x h x d)	80 x 80 x 25 mm
Weight	75 g
Mounting	Wall-mount
Antenna	Internal

Electrical connections

Supply voltage	Battery, life span 12 years

User interface

Push button SW1	Product activation, enter setup mode, next page in setup mode
Push button SW2*	Next page in standard mode, edit configurable field in setup mode
LCD display	CMa10w: Yes, CMa11w: No
LED light	Activation/configuration/confirmation
Momentary values	Temperature, humidity, status
Historic values	Average values over the last hour/day

M-Bus slave interface

Frequency	868.95 MHz
Transmit power	10 mW
Transmit interval	6 minutes
Encryption	Yes
Wireless M-Bus modes	T1

Approvals

EMC	EN 61000-6-2, EN 61000-6-3

ORDERING INFORMATION

Item number	Description
1050132	CMa10w Indoor temperature/humidity sensor, Wireless M-Bus, with display
1050134	CMa11w Indoor temperature/humidity sensor, Wireless M-Bus

CONTACT INFORMATION

Elvaco AB Technical support:
Phone: +46 300 434300
E-mail: support@elvaco.com
Online: www.elvaco.com

elvaco

EU DECLARATION OF CONFORMITY

This declaration of conformity is issued under the sole responsibility of the manufacturer:

Elvaco AB, Teknikgatan 18, S-434 37 Kungsbacka, Sweden.

Product	Year of CE-marking
CMa10w	2016
CMa11w	2016
CMa12w	2016
CMa20w	2016

The object(s) of the declaration listed above is in conformity with the relevant Commnunity harmonization legislation:
EMC Directive 2014/30/EU
Radio Equipment Directive 2014/53/EU
RoHS 2011/65/EU

And are in conformity with the following harmonization standards or other normative documents:
EN55022 (Radiated emission)
EN 61000-4-6 (Immunity to HF-injection)
EN 61000-4-3 (Immunity to RF-field)
EN 61000-4-11 (Immunity to voltage variation)
EN 61000-4-4 (Immunity to burst)
EN 61000-4-5 (Immunity to surge)
EN 61000-4-2 (Immunity to ESD)
EN 300 220-1 (SRD Low power radio equipment)

Kungsbacka, Sweden, 2016-04-16

David Vonasek, CEO

*Only applicable to CMa10w